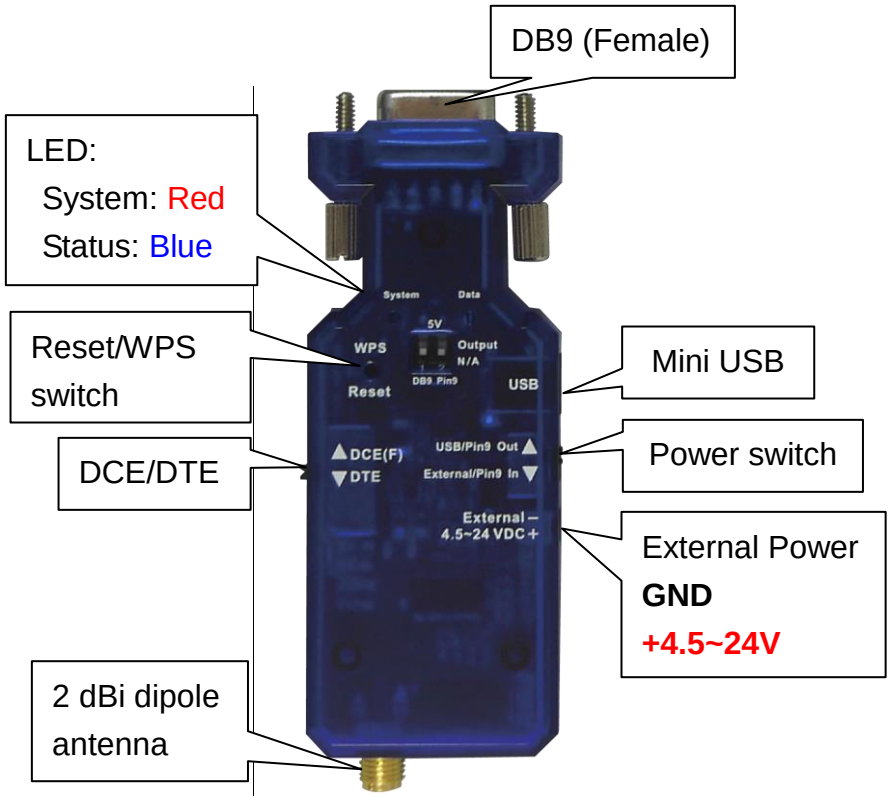
WiFi to RS-232 adapter user manual

WiFi to RS-232 adapter	Package Contents:
 White Box Dimension: 11 x 6 x 5 (cm) Total Package Weight: 126 g	● WiFi RS-232 adapter x 1 ● 2 dBi dipole antenna x 1 ● A4 User manual x 1 ● USB Cable x 1 ● Power cable x 1

1. Product profile:



2. Start to use the adapter

2.1 Please fasten the external antenna to the adapter.

2.2 Power input: Mini USB cable (5VDC) or DB9 connector Pin 9 (5VDC) or **external power supply (4.8~24VDC, 1.0 A Max.)**, please choose 1 source.

2.3 COM port default setting:

- Baud rate: 115,200 bps
- Data bit: 8
- Parity: none
- Stop bit: 1
- Flow control: none

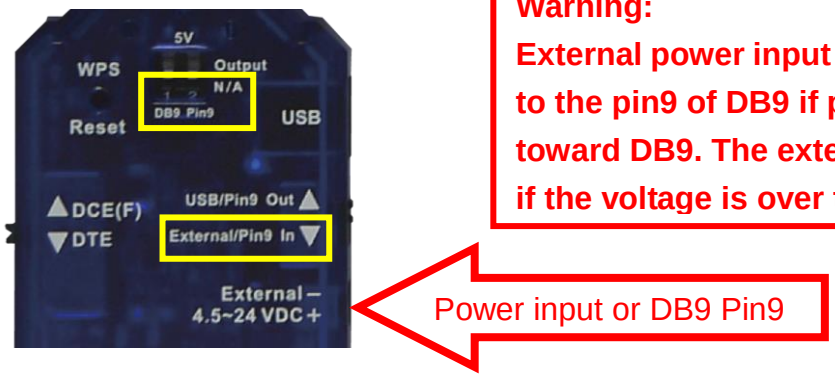
2.4 Network default setting:

- Simple AP with DHCP server
- SSID: Serial2WiFi_ab_cd (“ab” and “cd” is the last 4 code of Mac address)
- Security(WPA2): 12345678
- IP: 192.168.10.1
- Socket port: 8080
- Channel: 6
- Log in ID: admin
- Log in password: admin

2.5 DCE/DTE switch: DCE side. The switch will swap TX,RX,CTS,RTS of the COM port. Generally, DCE side for PC or NB setup. The user will test and switch to the correct side for the remote device.

3. DB9 Pin9 Power Input or Output:

3.1 External Power input or DB9 Pin 9 Power input: The two DIP switches toward N/A side by default. **Please do not switch any DIP switch toward the 5V side when the power switch is in the “External/Pin9 In” side.**

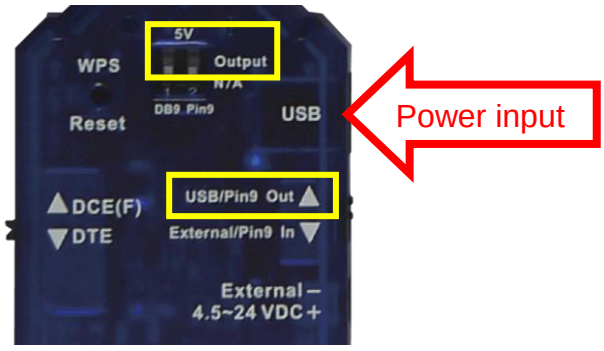


Warning:
External power input will output the same voltage to the pin9 of DB9 if pull the right DIP switch toward DB9. The external device will be damaged if the voltage is over the required.

Remark: The power cable is used for the external power input which support larger range of voltage, 4.5~24VDC.

3.2 DB9 Pin 9 Power output:

The DB9 Pin9 will power the external device by 5VDC via DB9 Pin9 when the power input comes from USB only. Please pull the right side DIP switch toward DB9 and the power from USB will out put to pin9. **Please choose the USB adapter which will power larger than 1000mAh and do not power the external device which will consume exceed 100 mAh.**



3.3 The RS-232 temperature/humidity sensor, active RFID reader or other sensors will be powered by the DB9 pin9 directly without extra power supply. If you need the options, please contact the suppliers.

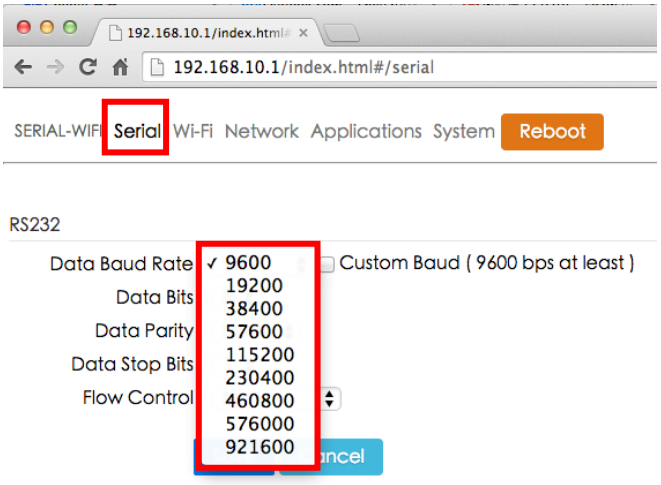
4. Configuration:

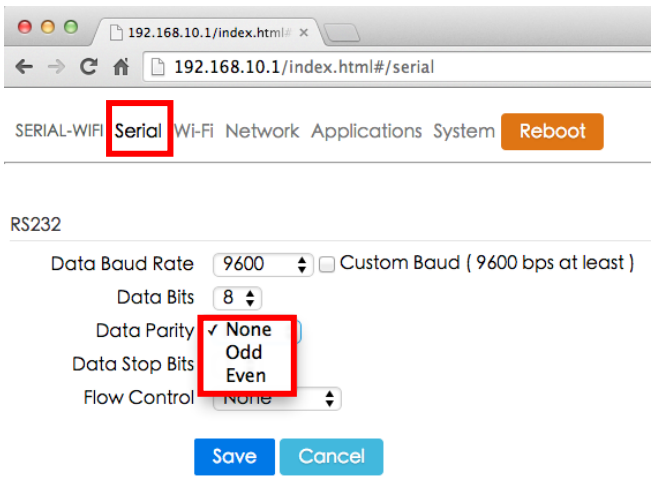
4.1 Log in:

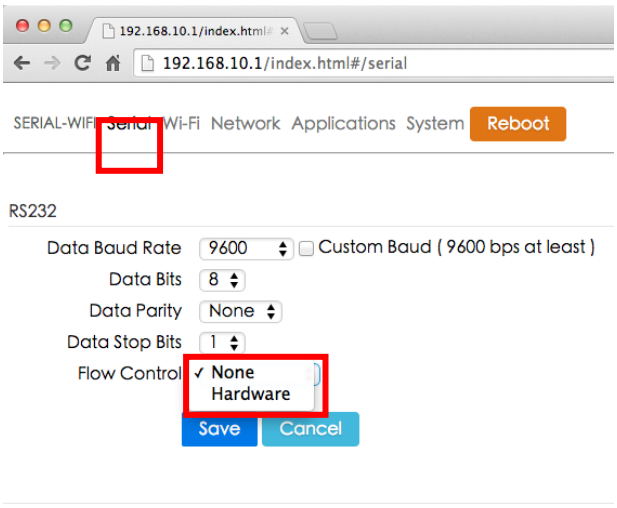
- Connect with the WiFi RS-232 adapter by PC,NB or Mobile terminal
- SSID: Serial2WiFi_ab_cd (abcd: Last 4 code of the Mac address)
- Security code: 12345678
- Execute browser, type IP address: 192.168.10.1
- ID: admin
- Password: admin

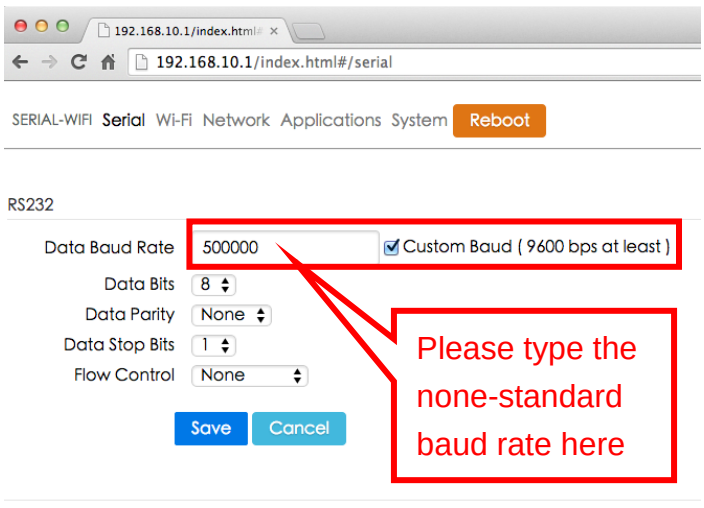
4.2 Serial setting:

- Baud Rate: 9600~921600 bps
- Data Bits: 8 only
- Parity: None, Odd, Even
- Stop Bits: 1 only







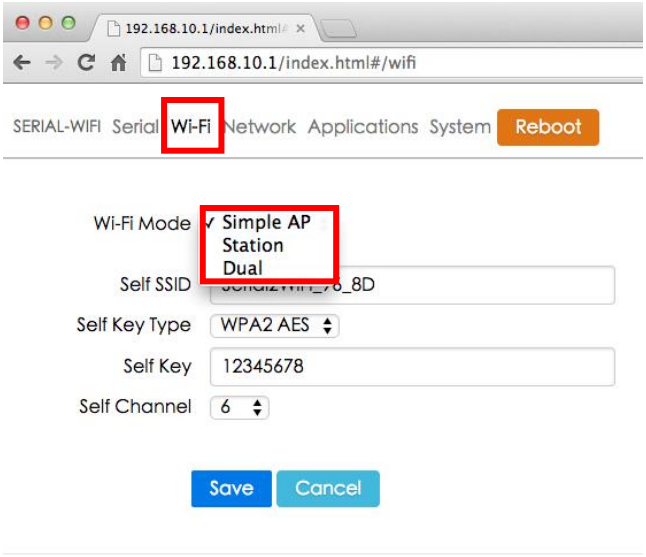


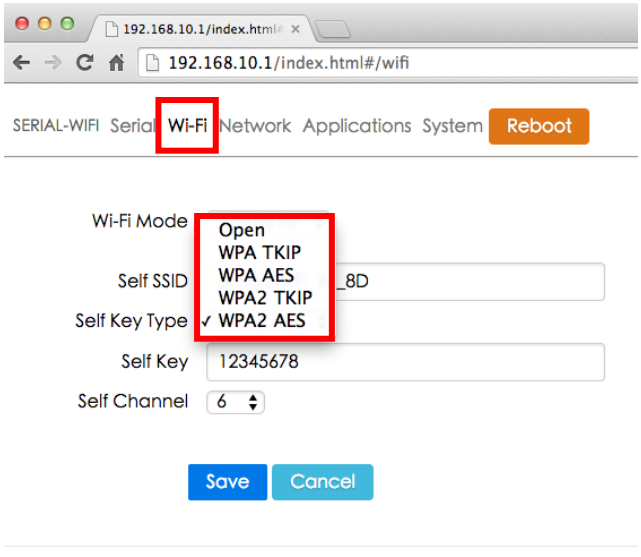
4.3 WiFi setting:

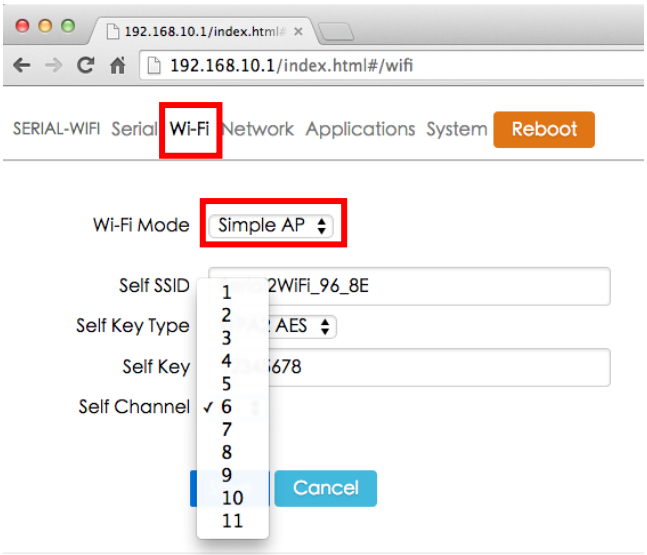
Mode: Simple AP, Station, Dual (AP & Station)

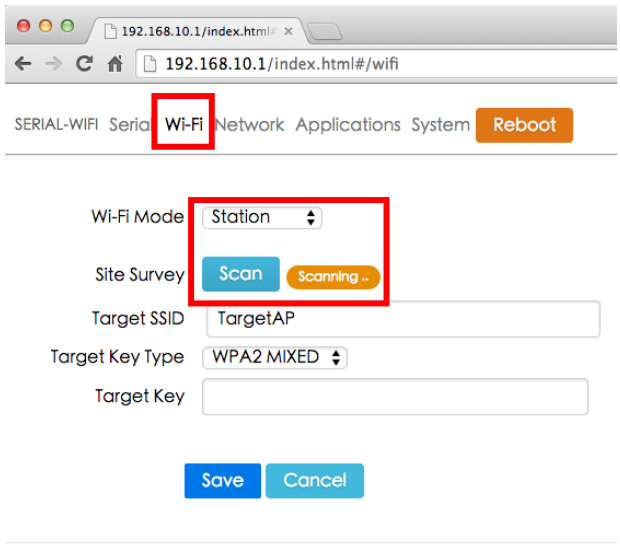
Encryption: Open, WPA TKIP, WPA AES, WPA2 TKIP, WPS2 AES

Channel: auto,1~11, 6 (default)

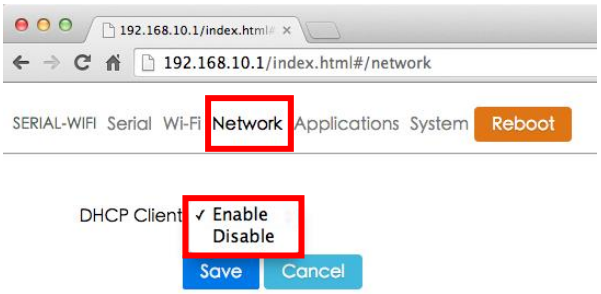


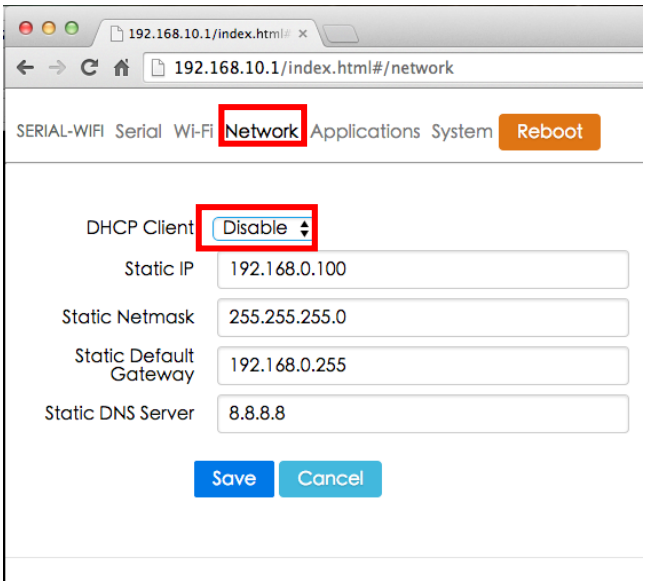






4.4 Network setting:

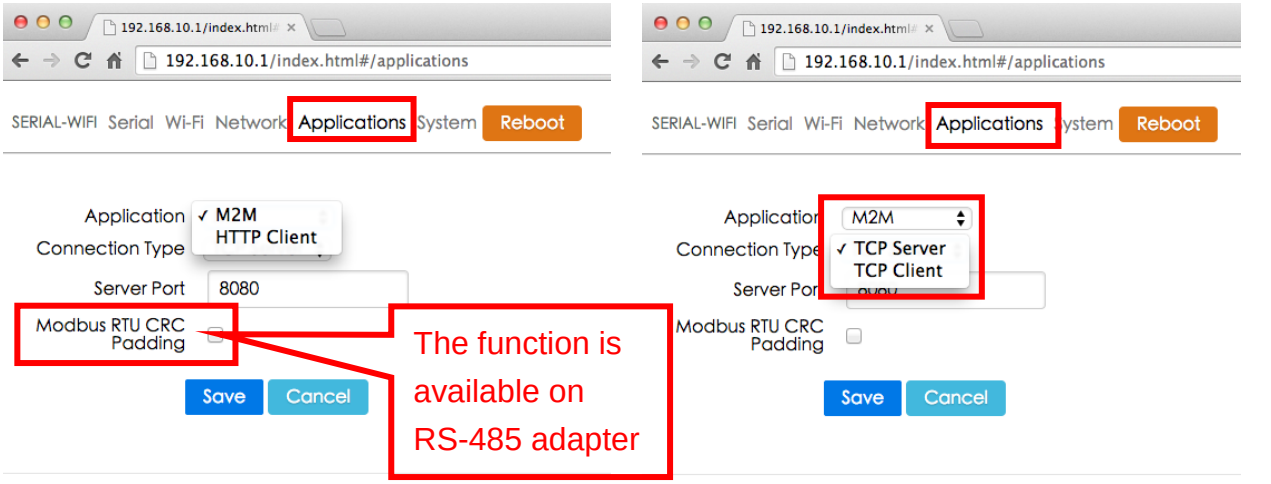


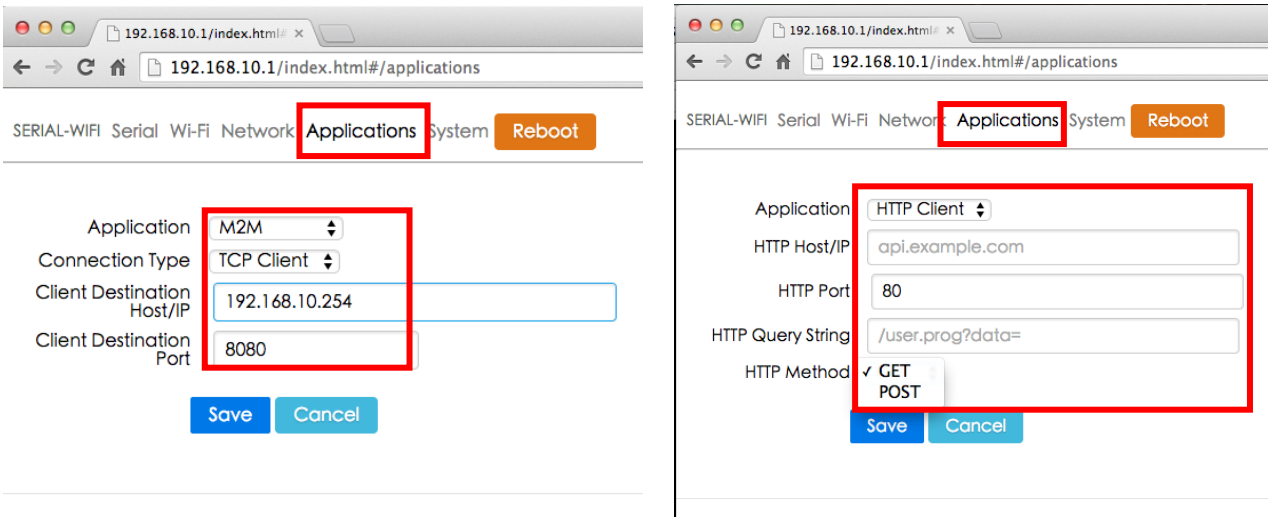


4.5 Applications:

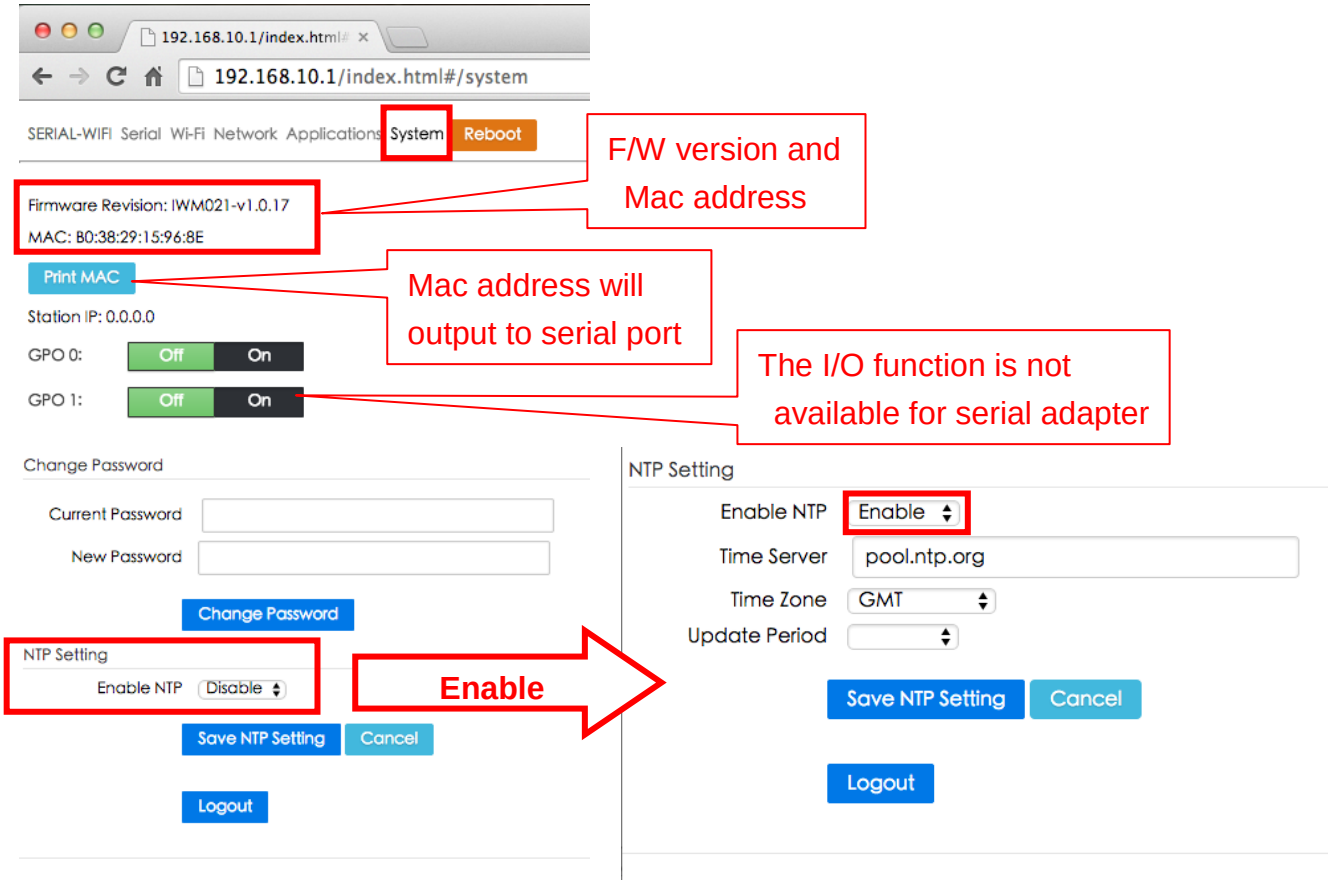
4.5.1 M2M: TCP Server and TCP Client

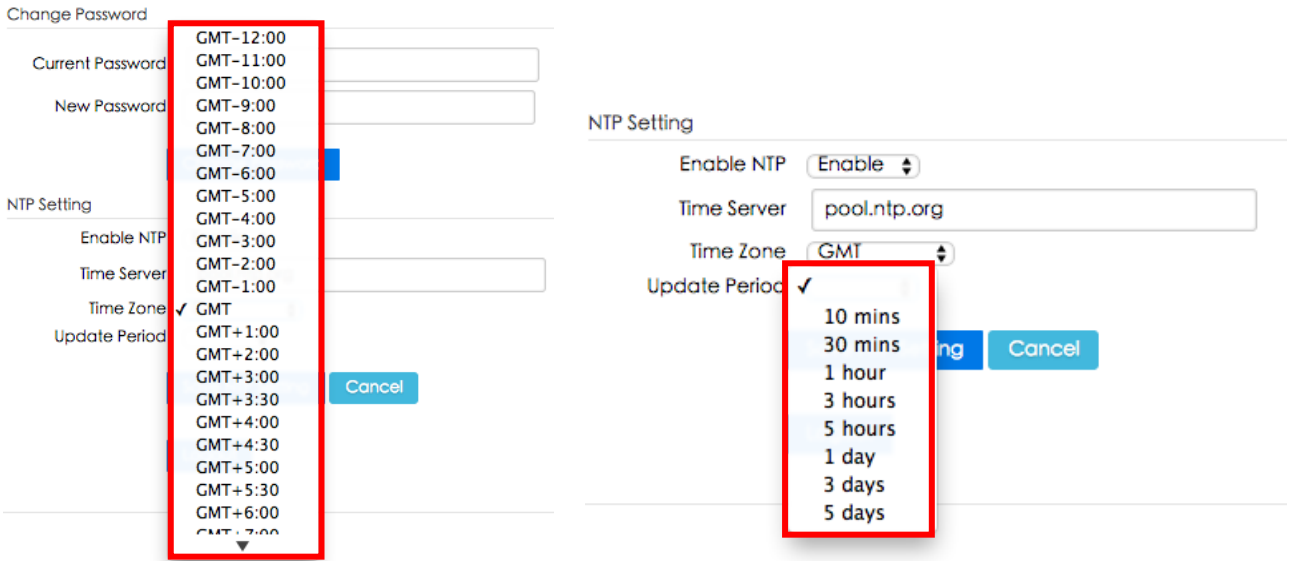
4.5.2 HTTP Client: GET and POST


192.168.10.1/index.html#/applications
SERIAL-WIFI Serial Wi-Fi Network Applications System Reboot
Application M2M
Connection Type HTTP Client
Server Port 8080
Modbus RTU CRC Padding
Save Cancel
TCP Server
TCP Client
The function is available on RS-485 adapter


192.168.10.1/index.html#/applications
SERIAL-WIFI Serial Wi-Fi Network Applications System Reboot
Application M2M
Connection Type TCP Client
Client Destination Host/IP 192.168.10.254
Client Destination Port 8080
Save Cancel
Application HTTP Client
HTTP Host/IP api.example.com
HTTP Port 80
HTTP Query String /user.prog?data=
HTTP Method GET POST

4.6 System:


192.168.10.1/index.html#/system
SERIAL-WIFI Serial Wi-Fi Network Applications System Reboot
Firmware Revision: IWM021-v1.0.17
MAC: B0:38:29:15:96:8E
F/W version and Mac address
Print MAC
Station IP: 0.0.0.0
Mac address will output to serial port
GPO 0: Off On
GPO 1: Off On
The I/O function is not available for serial adapter
Change Password
Current Password
New Password
Change Password
NTP Setting
Enable NTP Disable
Save NTP Setting Cancel
Logout
Enable
NTP Setting
Enable NTP Enable
Time Server pool.ntp.org
Time Zone GMT
Update Period
Save NTP Setting Cancel
Logout



Remark: The NTP data will be bundled with the sensor data for the application of IOT, Internet of Things. If you need the function, the F/W will be modified.

5. LED indication:

Mode	LED Status						Remark
Start (* procedure)	Red (System):	off	on	off	off	on	Red LED solid on when ready
	Blue (Data):	off	on	off	flash ... (not ready)	off	
WPS	Red (System):	flash	go to *				Press over 1 second
	Blue (Data):	off	go to *				
Reset to default	Red (System):	off	go to *				Press over 5 seconds
	Blue (Data):	off	go to *				
Data	Blue (Data): flash when data input or output via serial port						
Failure	Red (System): off when system fail						
OTA	Red (System):	flash in turn with Blue(Data) LED					F/W upgrade, please check section 6.3
	Blue (Data):	flash in turn with Red (System) LED					

6. WPS/Reset button: Please put the paperclip or small pin into the hole for pressing the button.

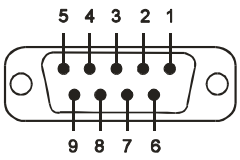
6.1 WPS: Press the button in short time which is not longer than 3 seconds.

6.2 Reset to default setting: Press the button over 5 seconds, the WiFi adapter will reset to default value. The LEDs will be off for some time and then reboot to the default value.

6.3 Firmware upgrade: Power off and press the button, then power on. The two LEDs will flash in turn and release the button. The adapter will be in OTA mode for firmware upgrade.

7. RS232 Interface: DB9 Female with Nut

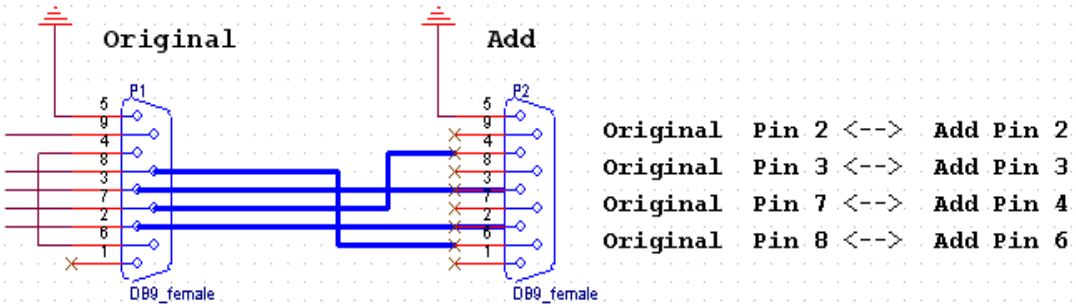
7.1 Pin-out:



7.2 Signals:

Pin	Signal	DTE Direction	DCE Direction	Description
1	CD	Input	Output	Not connected
2	TxD	Output	Input	Transmitted data
3	RxD	Input	Output	Received data
4	DSR	Input	Output	Contact manufacturer to set this
5	GND	N/A	N/A	Signal ground
6	DTR	Output	Input	Contact manufacturer to set this
7	CTS	Input	Output	Clear to send
8	RTS	Output	Input	Request to send (Default)
9	Vcc	Input	Input	External Power supply (Remark 1)

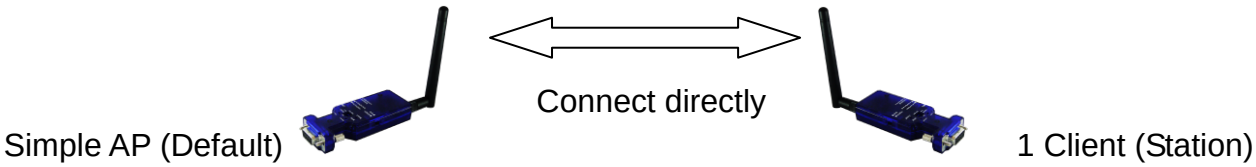
7.3 DSR/DTR Connection:



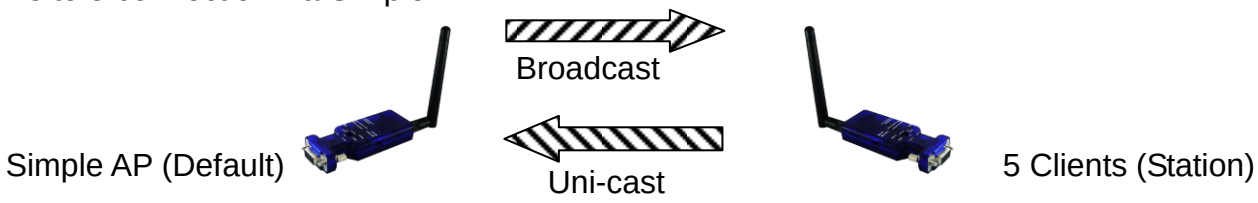
8. Command set: Please check the application note document.

9. Network:

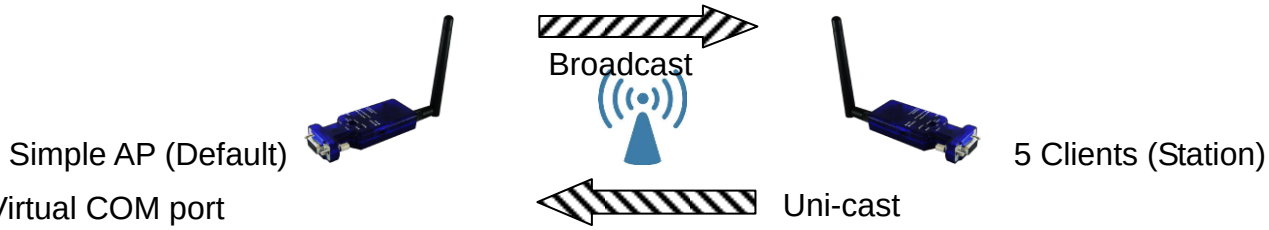
9.1 One to one connection: The two WiFi adapters will be connected directly without access point.



9.2 One to 5 connection via Simple AP



9.3 One to 5 connection via other Access Point:



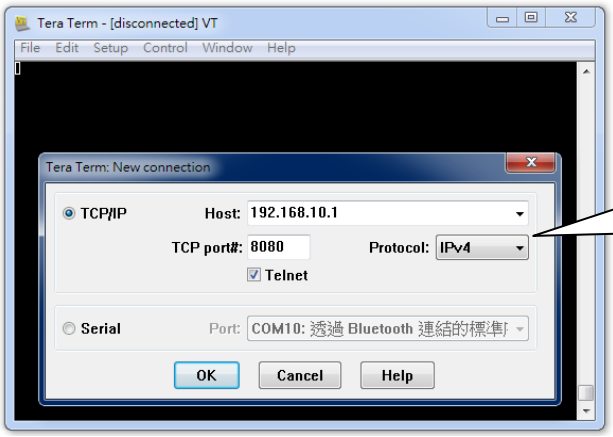
10. Virtual COM port

10.1 Factory Mac bundled Virtual Serial Port (VSP) Driver (Will be available soon)

10.2 Reference Driver: www.eterlogic.com

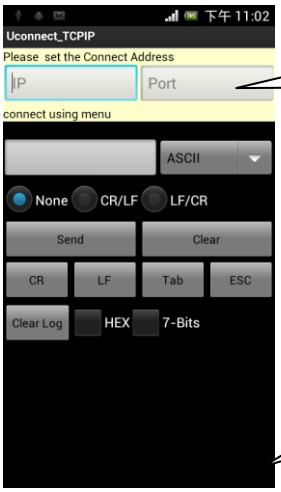
11. Test software:

11.1 Teraterm: ASCII code terminal emulator for TCP/IP socket and COM Port. Please search “teraterm” on Google searching and install the main program.



IP: 192.168.10.1 (Default)
TCP Port: 8080 (Default)
Protocol: IPV4, Telnet

11.2 Android APP: Android terminal emulator of TCP/IP socket. Support ASCII or Binary format. Please search “uconnect” on Google Play site choose the TCP/IP type.



IP: 192.168.10.1 (Default)
TCP Port: 8080 (Default)

Click the menu on the corner
Select “Connect”

12. Options: Please contact the vendors.

12.1 RS-232 Temperature and Humidity Sensor

12.2 RS-232 Bluetooth BLE Active RFID Reader

12.3 RS-232 Gas, CO, CO2, Smoke Sensor

12.4 IR Temperature Sensor

12.5 IR Remote controller

12.6 Power Plug Remote controller

12.7 LED Light DAC Remote controller

12.8 Home Gateway

12.9 Indoor Real Time Location System (RTLS)

Remark: All contents are subject to change without notice.